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First record of the little known genus *Annamosdara* Kaszab, 1941 (Coleoptera, Tenebrionidae, Stenochiinae, Cnodalonini) from China, with description of a second species

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Abstract

The genus *Annamosdara* Kaszab, 1941 is recorded from China for the first time. A new species, *Annamosdara jianfengensis* **sp. nov.**, is described and illustrated from Hainan Island. The ventral characters and male genitalia of the genus *Annamosdara* are illustrated for the first time and figures of the habitat and a distribution map are given.

Key Words

China, darkling beetle, Hainan Island, new species, Oriental Region, taxonomy

Introduction

Kaszab (1941) established the genus *Annamosdara* to include *A. multidentata* Kaszab, 1941 (type species; "Dolat (= Dalat or Da Lat), Annam (Vietnam)") and placed the genus in the tribe Misolampini sensu Reitter (1917) (= Cnodalonini, subfamily Stenochiinae; Bouchard et al. (2005, 2011)), only the type species being known so far. When studying some tenebrionid material from Hainan Island, we found a few very interesting specimens and identified them as a species of *Annamosdara* because of their unusual pronotum and prosternal process. In the following text, this species is described as new to science.

Material and methods

The specimens were examined and dissected using a Nikon SMZ800 stereomicroscope and images were taken using a Canon EOS 5DSR with Laowa 25 mm f/2.8 2.5–5X Ultra Macro lens, Laowa100 mm f/2.8 2x Ultra Macro APO and Nikon 10x CFI Plan Achromat Microscope Objective. Aedeagi were detached from the body with tweezers and insect pins. The distribution map was downloaded from SimpleMappr (https://www.simplemappr.net). Authors' remarks are enclosed in brackets "[ ]". Specimens examined in this study are deposited at the Museum of Hebei University, Baoding, China (MHBU).

Results and discussion

Genus *Annamosdara* Kaszab, 1941

Type species. *Annamosdara multidentata* Kaszab, 1941, by original designation.

Remarks. Kaszab (1941) pointed out that this very peculiar genus is characterised by its tuberculated dorsal body, simple legs, not bordered ventrite V and, especially, the shape of the prosternum. It can be readily distinguished from the morphologically similar genus *Euphloeus* Pascoe, 1887 by its differently-shaped prosternum (prosternum broad and almost flat; prosternal process ended with a small hump at the apex) and neither

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grooved nor carinate tibiae, as well as the totally different upper body sculpture. However, he did not provide any figures of these characters and did not examine the genitalia. Since Kaszab (1941) established the genus, except for a mention of the name in Bouchard et al. (2021), this genus has been scarcely documented. Its morphological characters lack clear images and nothing is known about its biology. We tried to locate the type of *A. multidentata* Kaszab, 1941, but have not gained access to it as of now.

Distribution. Vietnam, China (new record).

Annamosdara jianfengensis sp. nov.

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Figs 1–4

Type material. ***Holotype*:** • ♂, "Hainan, Ledong Li Autonomous County, Mt. Jianfengling, Mingfeng Valley [海南乐东尖峰岭鸣凤谷], 2023.I.5, Fan Gao leg.". ***Paratypes*:** • 1♂, "Hainan, Ledong Li Autonomous County, Mt. Jianfengling, Mingfeng Valley [海南乐东尖峰岭鸣凤谷], 2023.I.23, De-Yao Zhou leg."; • 1♂, "Hainan, Ledong Li Autonomous County, Mt. Jianfengling, Mingfeng Valley [海南乐东尖峰岭鸣凤谷], 2023.II.6, Yu-Chen Zheng leg."; • 1♂, "Hainan, Ledong Li Autonomous County, Mt. Jianfengling [海南乐东县尖峰岭], 2007-V-17, Yi-Bin Ba & Jun-Tong Lang leg.".

Description. Body oval, strongly convex, tuberculated, brownish-grey, dull. Flightless.

Male. ***Head*** (Fig. 2A, B, H). Strongly transverse and uneven, densely punctate and wrinkled with short setae, intervals between punctures convex, with the largest punctures between the frons and vertex; visible part of labrum broadly elliptical and covered with setae, anterior margin pubescent; clypeus buccal membrane broaden and light yellow; frontoclypeal area depressed medially, frontoclypeal suture distinct; clypeus transverse, much more depressed than frons; eyes small and protruding beyond contour of head, interocular distance approximately 3 times the eye width, distance between outer margins of eyes represents the greatest width of head; genae weakly convex, genal margins slightly sinuate; vertex convex. Mentum (Fig. 2B) nearly subtrapezoidal; maxillary reddish, covered with pale setae, terminal segment nearly triangular. Antennae (Fig. 2A) long, distal four antennomeres moderately dilated, forming slight club, XI oblong-oval; length ratio of antennomeres II–XI 4: 17.6: 10.8: 10.3: 10: 10.4: 11: 8.8: 9.5: 17.1; width ratio: 7: 7.7: 7.1: 7.7: 8: 8: 11: 11.9: 13.2: 15.

Prothorax. Pronotum (Fig. 2H) transverse, length/width ratio 1.4/1, widest near the middle of length; surface covered with dense punctures with sparse, fine and short setae, disc strongly convex with irregular wrinkles and tubercles; anterior margin roundly protruding forward; anterior angles sharp and protruding sideways; lateral margins extended with radial keel-like ridges and approximately six prominent angles on each side; posterior margin round and protruding backwards; posterior angles widely obtuse or rounded; prothoracic hypomera covered with dense microsculpture and coarse punctures with short setae. Prosternum narrow, densely punctate and microsculptured with fine setae; prosternal process (Fig. 2C, D) broad linguiform, densely microsculptured, wrinkled and covered with setae, convex posteriorly and sloping laterally with a small hump around the apex, apex blunt, tooth-shaped and protruding forwards anteriorly in the middle.

Pterothorax. Elytra broad-oval, almost as wide as long, strongly convex, covered with sparse and short setae, abruptly widened and sloping posteriorly, widest at middle of length; each elytron covered with eight rows of evident punctures, intervals slightly convex with irregularly-sized tubercles; base as wide as the pronotal one;

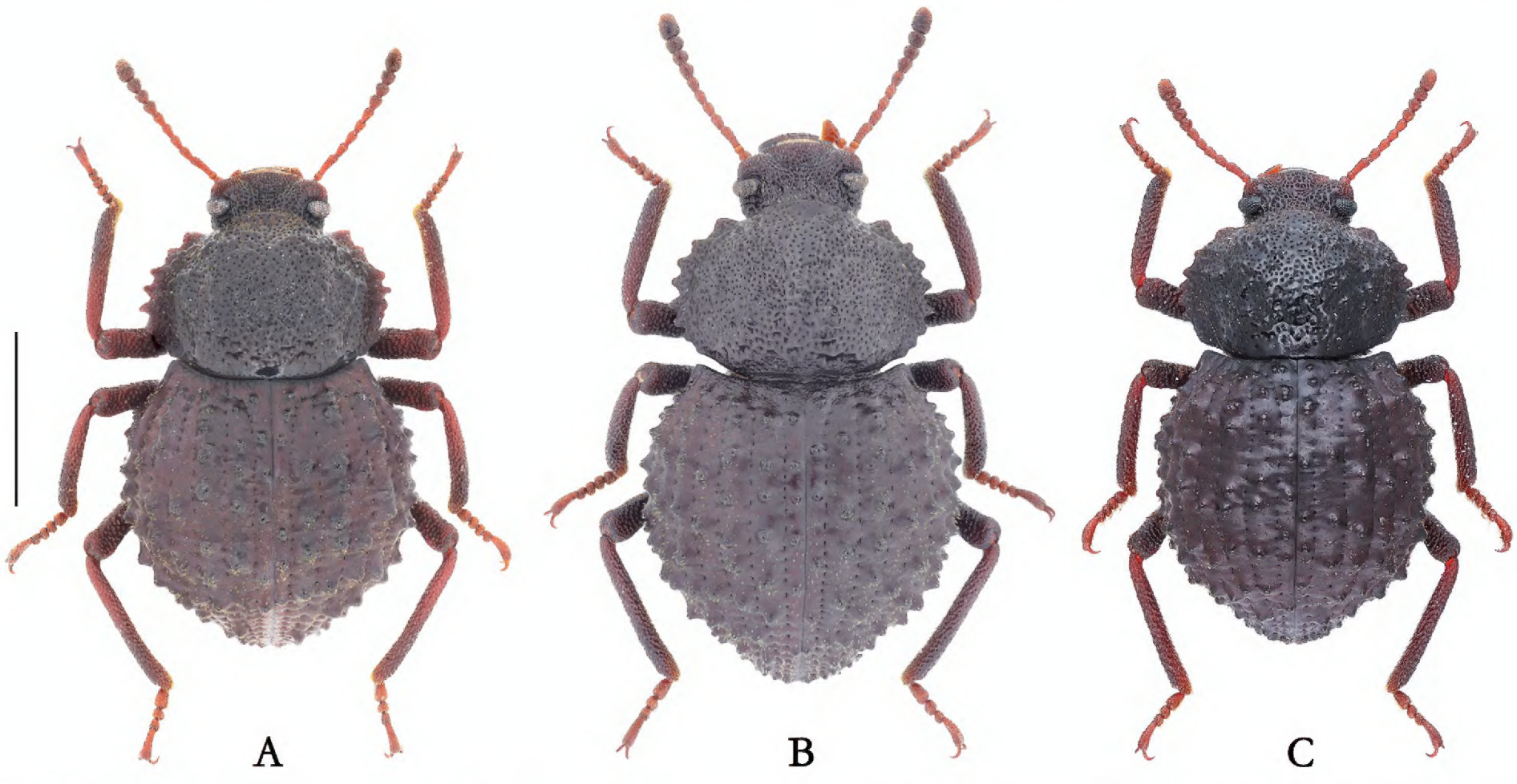

Figure 1. Habitus of *Annamosdara jianfengensis* sp. nov. **A.** Holotype, ♂; **B, C.** Paratypes, ♂ (**C.** Image by Mr. De-Yao Zhou). Scale bar: 3 mm.

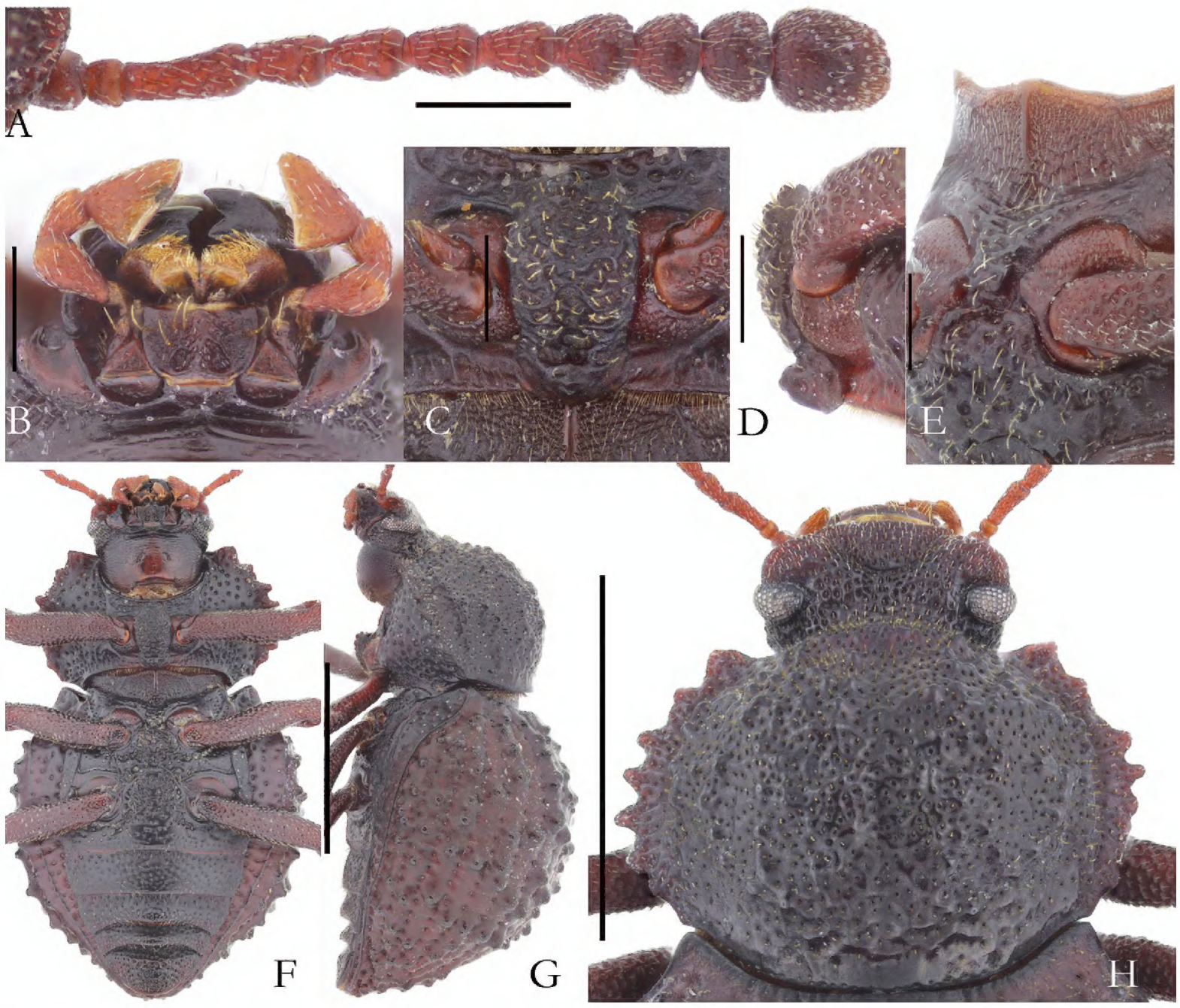

Figure 2. Characters of *Annamosdara jianfengensis* sp. nov., holotype. **A.** Left antenna in dorsal view; **B.** Mentum in ventral view; **C, D.** Prosternal process in ventral and lateral view, respectively; **E.** Mesosternum and metasternum in oblique view; **F, G.** Body in ventral and lateral view, respectively; **H.** Head and pronotum in dorsal view. Scale bars: 0.5 mm (**A–E**); 3 mm (**F–H**).

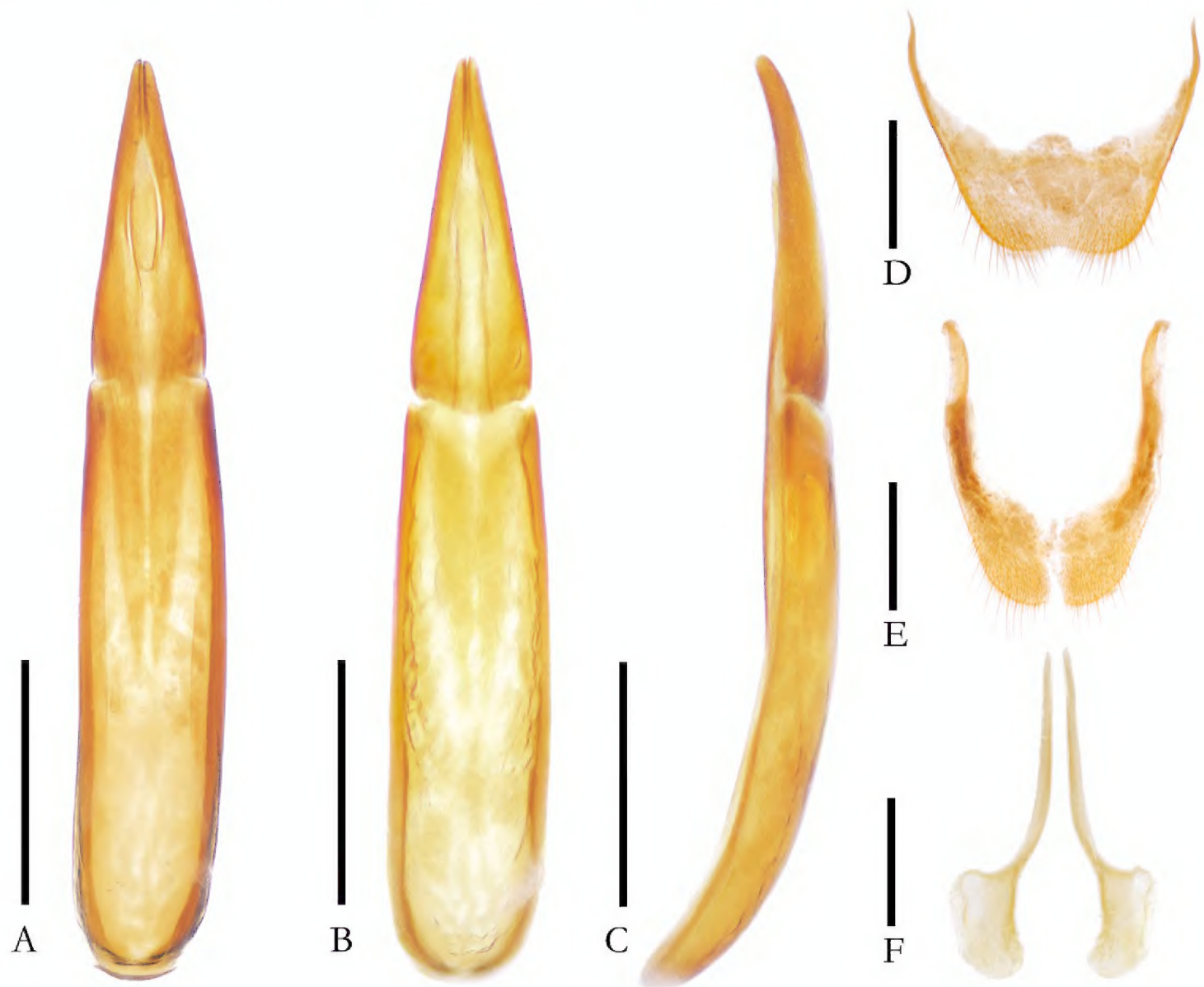

Figure 3. Characters of *Annamosdara jianfengensis* sp. nov., holotype. **A–C.** Aedeagus in ventral, dorsal and lateral view, respectively; **D.** Sternite VIII in ventral view; **E.** Tergite VIII in dorsal view; **F.** Spiculum gastrale. Scale bars: 0.5 mm.

Figure 4. Habitat and distribution of *Annamosdara* species. **A.** Main peak of Mt. Jianfengling; **B, D.** The jungles around Mingfeng Valley of Mt. Jianfengling; **C.** Living holotype of *A. jianfengensis* sp. nov. inhabiting rotten wood; **E.** Distribution of *Annamosdara* species (**C, D.** Image by Mr. Fan Gao).

humeral angles sharp and protruding forwards; epipleuron covered with sparse and large punctures with short setae, reaching elytral apex, rather broad anteriorly, strongly narrowed posteriorly. Scutellum absent. Meso- and metasternum (Fig. 2E, F, G) narrow and rugulose with coarse punctures and setae, punctures larger and setae longer around coxae; mesosternum (Fig. 2E) humped between mesocoxae, metasternum convex between mesocoxae.

Abdomen. Ventrites transverse and densely punctate with setae, setae in the middle longer, punctures around base larger; ventrite I forming a semi-circular process between metacoxae; ventrites III–V depressed at the base (Fig. 2G); ventrite V not bordered at apex, covered with the largest and the densest punctures.

Legs. Long and slender, densely and coarsely punctate with setae; femora almost straight and slightly clavate; tibiae almost straight, slightly arcuate and densely pubescent near the apex; tarsi rather robust, each ultimate tarsomere not longer than the length of preceding tarsomeres combined, the preceding tarsomeres moniliform and pubescent ventrally.

Aedeagus (Figs. 3A–C). Slender, almost symmetrical, 1.9 mm in length, 0.3 mm in width; parameres lanceolate, finely punctate, widest at base and narrowing towards apex nearly straight, distal part weakly curved to ventral side in lateral view; parameres 0.6 times as long as basal pieces.

Female. Unknown.

Measurements. Body length: ♂ 7.8–10.2 mm, width: ♂ 4.5–5.7 mm.

Diagnosis. This new species can be readily distinguished from the type species *Annamosdara multidentata* Kaszab, 1941 by the following points: surface of head uneven (broad and flat in *A. multidentata*); frontoclypeal area strongly depressed medially, frontoclypeal suture distinct, clypeus much more depressed than frons (frontoclypeal area slightly depressed, frontoclypeal suture not impressed, clypeus flat in *A. multidentata*); eyes wider than genae (genae as wide as eyes in *A. multidentata*); humeral angles sharp and protruding forwards (round and not protruding forwards in *A. multidentata*).

Etymology. The species name is derived from the type locality, Jianfeng, which is rich in various taxa of tenebrionid beetles.

Distribution. China: Hainan Island.

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